

JUNE 28 - 30, 2005 NORFOLK CONVENTION CENTER

## Introduction to

# Naval Integrated Fire Control-Counter Air (NIFC-CA)

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### NIFC-CA Evolution



- 1997 Initial Land Attack Cruise Missile defense (LACM-d) effort in response to 1994 DSB summer studies for CM defense
- 1998 Navy Overland Cruise Missile Defense (OCMD) charter signed. Work begins on ADSAM capability
- 2001 PEO(T) begins work on Air Directed Air to Air Missile (ADAAM) capability.
  In October, Navy responds to March 2001 Theater Air and Missile
  Defense CRD.
  - Name changes to Navy Offensive Counter Air (OCA) was to better reflect a shift from Defensive to extended range Offensive Air Defense.
  - Naval Integrated Fire Control Counter Air (Naval IFC CA) MNS drafted.
- 2002 Naval IFC Flag Officer Steering Committee directs the Naval IFC effort to include both ADSAM and ADAAM capabilities.
  - The responsibilities for Naval Integrated Fire Control Counter Air (NIFC-CA) formally captured in joint direction from ASN-RDA and the VCNO
- 2004 NIFC-CA effort broadened further during the Nov 2004 EXCOMM when direction was given to integrate the USN and USA IFC efforts



## **Project NIFC-CA**



#### **VCNO/ASN RDA Letter**

#### "Updated Responsibilities for Management of Naval Integrated Fire Control - Counter Air (NIFC-CA)", 11 OCT 02



OF OF THE ASSISTMAT SECRETARY NOW, DEVELOPMENT AND ACQUISITION

Vice Chief of Naval Operations 2000 Navy Pentagon Maghington, DC 20380-2000 OCT 1 1 2002

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Subj: UPDATED RESPONSIBILITIES FOR MANAGEMENT OF SAVAL INTEGRATED FIRE CONTROL - COUNTER AIR (NIFC-CA)

(a) USD (A&T) Memo of 11 Jan 96 (b) ASN (RDA)/VCNO Memo of 4 Apr 96 (c) ASN (RDA)/NO Memo of 3 Feb 27

(d) Chief of Mayal Operations "Sea Fower 21" Jun D2

In January 1996, Mr. Paul Kaminski, them Under Secretary of Defense for Acquisition and Technology (USD (AAT)), and the Vice Chairman, Joint Chiefs of Staff (VCDCS), Admiral N. A. Ovens, initiated action to address the emergence of the cruise missile threat. Reference (a) promulgated support for several Land Attack Cruise Missile/Overland Cruise Missile Defense (LACM/DCMD) initiatives. The Navy has vigorously pursued development of the required technologies and responent my necessary to meet this threat, as implemented by reference (b) by leveraging improvements to existing systems. LACHD resminolegy has evolved to Maval Integrated Fire Control -Control - Control computation, Haferende (c) established a Mavy Land Attack Cruise Missile Defense Play Steering Committee to coordinate and review progress of Havy LACMD progress, et chaired by N88 and N86, Reference (d), the CNO's "Sea Power 21" vision, incorporate Shield Cornerstone. incorporates NIPC-CA as a pivotal element of the Ses

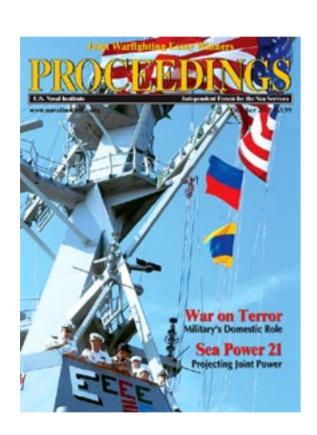
2. Although the basic tensts of the Navy program have remained largely unchanged, significant changes have occurred to the organizational structure. Therefore, it is appropriate to update the responsibility assignments.

The Director, Warfare Integration and Assessment (MSO/70) will oversee mission capabilities that encompass more than one warfare sponsor. The Director, Surface Warfare (M76) Program Executive Officer for Integrated Warfare Systems, PEO IWS, is assigned overall program management and system integration responsibility for NIFC-CA. PEO IWS will be assisted by the Program Executive Officer, Tactical Air Programs, PEO T, the Office of Naval Research (ONR/N091D), the NIFC-CA element program managers, the acquisition agents, and the cognitive office within the USMC Forces Systems Command to best support NIFC-CA development.



## Sea Shield Is Power Projection Naval Air Defense Strategy





"Perhaps the most dramatic advancement promised by Sea Shield will be the ability of naval forces to project defensive power deep overland, assuring friends and allies while protecting joint forces ashore."

"A next-generation long-range surfaceto-air Standard Missile, modernized E-2 Hawkeye radar, and Cooperative Engagement Capability will combine to extend sea-based cruise missile defense far inland."

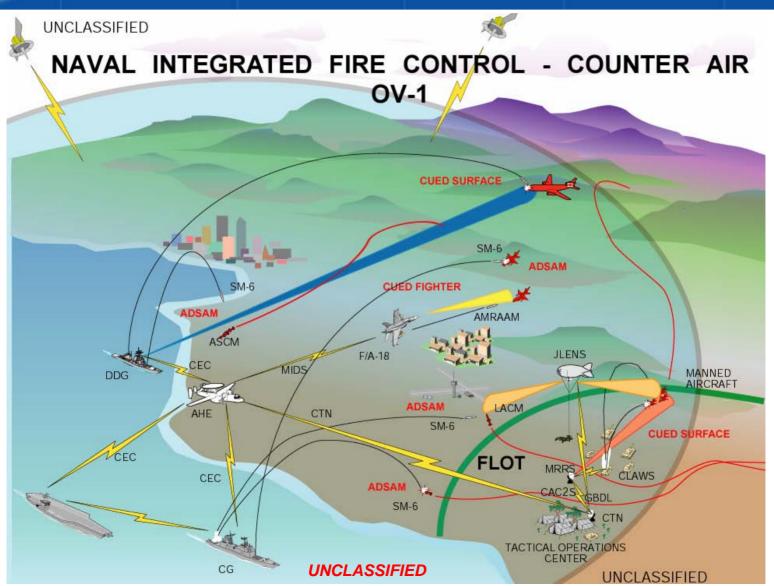
> ADM Vern Clark, October 2002 "Sea Power 21: Projecting Decisive Joint Capabilities"

NIFC-CA IS AN ENABLER FOR SEA SHIELD



## NIFC-CA Operational View

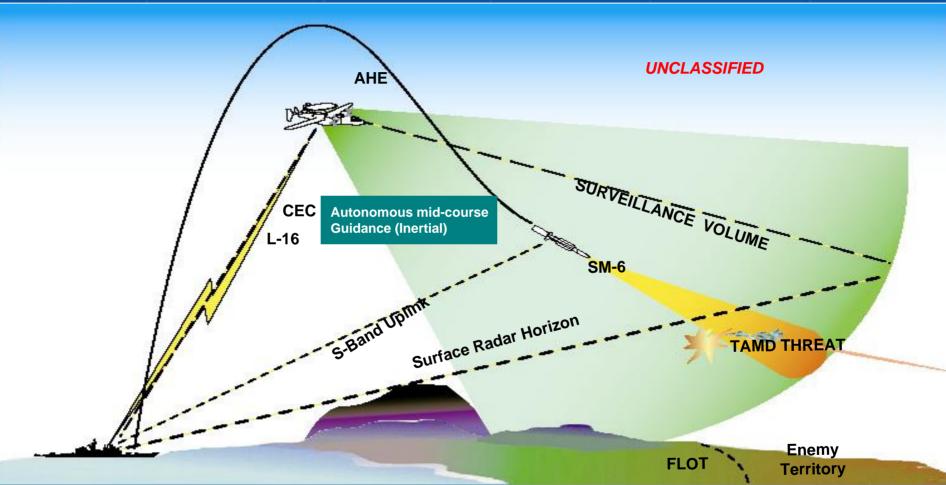






## NIFC-CA CONCEPT ADSAM Kill Chain





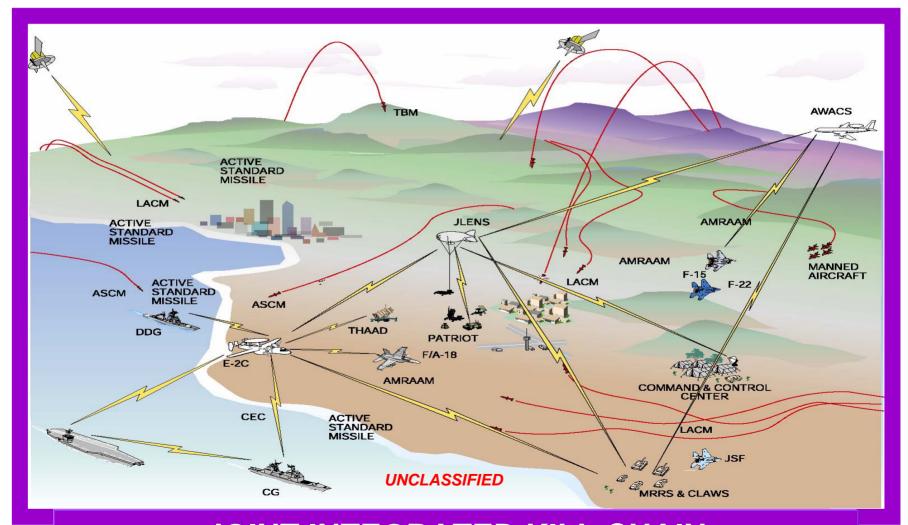
EXTENDS ENGAGEMENT RANGE OUT TO MAXIMUM RANGE OF INTERCEPTOR MISSILES



### JOINT INTEGRATED AIR DEFENSE

Joint Theater Context





JOINT INTEGRATED KILL CHAIN



## NIFC-CA Development



- Based on Mature Technology for Real-Time Integrated Fire Control
- Capability Defined by a Family of Curves
  - Manned Aircraft at Maximum Kinematic Range of Missile
  - Low Flyer / Cruise Missile, Over Land
- CONOPS Can Improve Performance
- Architecture Facilitates Joint Integration
  - Working in Parallel with Other Services

**Deliver NIFC-CA Capability in 2014** 



### **NIFC-CA Enablers**



#### Sea Shield

- •Battle-space Superiority
- Project Defensive Power Overland
- •Expand Coverage of Naval Area Defense

#### **Naval Integrated Fire Control**

- •FoS CONOPS
- Shared Resources
- •FoS Architecture
- •Resource Management
- OTH Engagements

#### **ENABLER OF SEA SHIELD**

#### CID

Early Identification

Capality

Target Characteristics

#### **Integrated Air Picture**

- Common Air Picture
- Target Discrimination
- Communication (Interfaces)

#### **DWC**

Needs

- •Sensor-Weapon Pairing
- Sensor Coordination
- Shooter Selection

**ENABLERS OF INTEGRATED FIRE CONTROL** 

Implementation of NIFC-CA Relies on Key Enablers: CID, SIAP, DWC

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## Summary



- NIFC-CA will extend engagement to the full kinematic range of interceptor missiles
- Combat Identification, Single Integrated Air Picture and Distributed Weapons Coordination are NIFC-CA enablers
- NIFC-CA will be fully interoperable with the Joint Services